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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,601	08/30/2001	Simon Julian Powers	36-1477	7934
23117	7590	06/23/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/914,601

Applicant(s)

POWERS ET AL.

Examiner

Christine Ng

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 and 15-17 is/are allowed.
- 6) ☒ Claim(s) 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13 line 9, the phrase "such that" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

In claim 14 line 9, the phrase "such that" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,047,326 to Kilkki in further view of U.S. Patent No. 5,495,478 to Wilkinson et al, and in further view of Patent No. 6,597,682 to Kari.

Kilkki discloses in Figure 2 a link manager for managing the sending of packet messages on a link (from node<sub>A</sub> 32 to node<sub>B</sub> 34 towards destination 36).

The packet messages originating from a plurality of packet message sources (UNI 24); each packet message including an associated message priority setting on a scale of  $n(0)$  to  $m(7)$ . Each cell is assigned a priority label chosen from a predetermined cyclic sequence of eight priority levels ranging from zero, which indicates the highest priority, and seven, which indicates the lowest priority. Refer to Column 6, lines 49-54 and Column 8, lines 8-22.

Each packet message having been sent by a source (user 20) sending sequences of  $m - n + 1$  packet messages cycling through each priority setting of said priority setting scale (using priority level computing unit 28). The priority level computing unit 28 assigns a priority label chosen from a predetermined cyclic sequence of eight priority levels ranging from zero, which indicates the highest priority, and seven, which indicates the lowest priority. Refer to Column 8, lines 8-22.

The link manager comprising:

At least one packet message input port (input to node<sub>A</sub> 32) to receive such packet messages. Refer to Column 7, lines 43-45 and Column 8, lines 23-38.

Means (Figure 5 or 7, filter 88 and memory manager 89) arranged to read the priority setting associated with each such received packet message. Node<sub>A</sub> 32 accepts or discards the cell received from the UNI 24 based on the priority level of the cell and the buffering capacity of itself. Refer to Column 8, lines 23-38; and Column 15, line 48 to Column 16, line 30.

Means (Figure 5 or 7, filter 88 and memory manager 89) arranged to sort each such received packet message into a packet message queue (Figure 5, memory 90 or

Figure 7, real-time buffer 93 and non-real-time buffer 94) on the basis of the priority setting associated with each such received packet message. Filter 88 only accepts a packet if the priority level of the packet is greater than the allowable priority level  $PL_a$ , with  $PL_a$  depending on the queue occupancy. Refer to Column 15, line 48 to Column 16, line 30.

Means (Figure 5 or 7, filter 88 and memory manager 89) arranged to test the link for sufficient capacity to send the packet message at the head of the queue. Node<sub>A</sub> 32 accepts or discards the cell received from the UNI 24 based on the priority level of the cell and the buffering capacity of itself. Refer to Column 8, lines 23-38; and Column 15, line 48 to Column 16, line 30.

Means (Figure 5 or 7, filter 88 and memory manager 89) arranged to send the packet message at the head of the queue, when the link has sufficient capacity, out through at least one output port (output of node<sub>A</sub> 32) onto the link (to node<sub>B</sub> 34 towards destination 36). Node<sub>A</sub> 32 accepts or discards the cell received from the UNI 24 based on the priority level of the cell and the buffering capacity of itself. Refer to Column 8, lines 23-38.

Kilkki does not disclose that said packet message source has an associated state and said packet message includes a packet message source state update.

Wilkinson et al disclose in Figure 2 that ATM packets can be used to provide updates on the status of its contents by using a VCI state table 54. "Linker 44 and unlinker 46 use VCI state table 54 to link formatted ATM cells into packets and to access and update state information for a particular VCI used by a packet and unlink

formatted ATM cells.” The VCI state table includes information such as state, expected sequence number, etc. Refer to Column 4, lines 27-54. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include said packet message source has an associated state and said packet message includes a packet message source state update; the motivation being so that each packet will have updated status information to facilitate data transmission to the receiving end.

Kilkki also does not disclose successively dropping packet messages from each sequence on a priority basis leaves the remaining packet messages of the sequence as evenly spaced with respect to the original sequence as possible.

Kari discloses in Figure 2A that a base station sends in the downlink direction information about the priority of each uplink control sub-channel. In the example in Figure 2A, every other time slot (8 of the 16 time slots) is assigned the highest priority of P4. The remaining time slots are divided according to priorities: with 4 time slots for priority P3, 2 time slots for priority P2, and 1 time slot for priority P1. Refer to Column 3, line 53 to Column 4, line 6. Dropping the P1 packet leaves 2 sets of 7 higher priority packets (P2, P3, and P4) evenly separated by one time slot. Dropping the P1 packet and 2 P2 packets leaves 4 sets of 3 higher priority packets (P3 and P4) evenly separated by one time slot. Dropping the P1 packet, 2 P2 packets and 4 P3 packets leaves the 8 higher priority packets (P4) evenly separated by one time slot. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include successively dropping packet messages from each sequence on a

priority basis leaves the remaining packet messages of the sequence as evenly spaced with respect to the original sequence as possible. One would be motivated to do so so that in case of congestion, the low priority packets will be dropped.

***Allowable Subject Matter***

5. Claims 1-12 and 15-17 are allowed.


***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng <sup>cn</sup>  
June 13, 2006

  
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